

### Definition

The cardiovascular history is obtained to identify evidence of organic heart disease or symptoms that suggest the presence, or possible presence, of cardiovascular abnormalities.

### Technique

Accurate history taking is an acquired skill that is perfected through experience. Details of the history may vary according to the physical and emotional status of the patient; his or her educational, cultural, and economic background; and the manner in which questions are asked. Direct questioning, questioning of family members and spouse, and review of medical records may be required.

Open-ended questions should be asked and time should be allowed for listening to the entire answer. Leading questions should be avoided. Patients often learn to use terms heard during previous interviews, and a question such as "describe your chest discomfort" will frequently yield more useful information than "is your chest pain a dull, squeezing sensation?"

The following areas should be explored thoroughly.

#### History of Specific Cardiovascular Disease

Has the patient ever had, or been told he or she had, a heart problem? If so, what? Obtain details regarding the diagnosis, when it was made, who made it, how it was diagnosed, and what was done about it.

1. *Heart attack.* The term *heart attack* means different things to different people. A history of heart attacks as a child, or "ten heart attacks since 1970," should be viewed with some skepticism unless documentation has been obtained. Today, the majority of patients with myocardial infarction experience a hospital stay of at least a week. Patients who state they were hospitalized for only a day or two, or were discharged from the emergency room, usually were not suffering from acute infarction. Further documentation is needed.
2. *Coronary artery disease.* Again, details concerning the diagnosis are needed.
3. *Valvular disease.* A history of a "leaky valve," or mitral prolapse, is obtained frequently. As some patients are told that they have mitral prolapse based solely on personality type, symptoms (usually chest pain or palpitations), and a systolic murmur (frequently an innocent flow murmur), further support for this diagnosis is needed.
4. *Heart murmur.* The age at which the murmur was first discovered is an important piece of historical

data. In addition, a history of any physical restrictions placed on the patient at the time of diagnosis should be sought.

5. *Rheumatic fever.* This is a frequently misused diagnosis and must be interpreted with caution. Details of the illness must be explored. Many patients state that their parents told them they had rheumatic fever, or give a history of fever, sore throat, and a heart murmur.
6. *Enlarged heart.* This is usually a radiologic diagnosis and is extremely nonspecific. Since "enlarged heart" can mean dilatation, hypertrophy, or poor x-ray technique, this history is of limited value.
7. *Heart failure.* Commonly, a history of shortness of breath with exertion, especially in the elderly, is translated as due to congestive heart failure. Because congestive failure is more a symptom complex (similar to fever) than a true diagnosis, this claim must be investigated further.
8. *Ectopy.* Has the patient been told of extra or skipped heartbeats? Was this on the basis of irregular pulse (often misleading) or ECG?
9. *Hypertension.* Does the patient have a history of high blood pressure? How was this diagnosed? Were any medications prescribed?
10. *History of heart surgery.* Be sure to look for appropriate surgical scars on physical examination. Similarly, if the patient denies heart surgery and a thoracotomy scar is found, what surgery was performed?
11. *History of other vascular disease.* Because there is an association between peripheral artery and coronary artery disease, this can be helpful. Since many adults complain of "cold feet," "poor circulation," and leg cramps, these symptoms alone do not confirm a diagnosis.

Has the patient ever had any tests performed on the heart or to evaluate the heart (electrocardiogram, echocardiogram, 24-hour Holter monitor, treadmill or exercise tests, cardiac catheterization)? It is better to describe the procedure in lay terms rather than to use words such as "echo" or "cath," which may not be understood. Also, a patient may have had a similar procedure (e.g., aortography or abdominal ultrasound) and may not realize that these tests did not evaluate cardiac structures.

Has the patient ever failed a military or job physical, or been denied insurance for medical reasons?

What is the medication history? It is important to know not only what medicines have been taken, but why they were taken. Diuretics are prescribed for a variety of reasons, and many patients do not know exactly why they are taking a particular drug. Also, one should be aware of "hidden" medications. For example, many women do not consider birth control pills a "medication" and will not mention them unless specifically asked.

Is there a history of previous hospitalizations, and did the patient spend time in an intensive care unit (ICU) or cardiac care unit (CCU)?

### *History of Possible Cardiovascular Disease*

In many adults, especially the elderly, cardiovascular disease does not start with sudden, significant decompensation. A careful history can reveal past evidence of cardiac problems. The following areas should be reviewed.

A growth and development history should be obtained. Was the patient healthy as a child? Able to keep up with siblings and peers? Active in sports or other physically demanding activities? For women, a pregnancy history, including any problems during gestation or childbirth, is important. For all patients, a review of previous cardiovascular symptoms should be made and should include any history of chest pain (the PQRST approach of DeGowin and DeGowin [1969] is a good one), shortness of breath (both at rest and with exertion), orthopnea, paroxysmal nocturnal dyspnea, edema, palpitations, dizziness, vertigo, loss of consciousness, fatigue, nocturia, claudication, cyanosis, and cough.

### *Other Relevant History*

Does the patient have a history of other diseases or conditions known to affect the cardiovascular system? The list of such conditions is long and can involve multiple organ systems. A good starting point is the New York Heart Association list of etiologies for cardiovascular disease.

A search for cardiac risk factors is also appropriately incorporated into the past history. Has the patient ever been told he or she has high or low blood sugar? (The latter is not a risk factor, but suggests that a blood glucose may have been drawn in the past.) Has the patient had high cholesterol or triglycerides, or high or low blood pressure? Has the patient smoked, chewed tobacco, or used snuff in the past? What about parenteral drugs (legal or illegal)? Has the patient been overweight?

### **Basic Science**

When obtaining a past history, one must be able to correlate what is being said with the known anatomic, physiologic, hemodynamic, and electrical properties of the heart. For example, the definition of myocardial infarction includes necrosis of tissue; hence, a history of seven heart attacks in a year in a patient who appears clinically asymptomatic must be accepted with caution. Similarly, as atherosclerosis is generally progressive, it would be unusual for someone to have severe, disabling angina pectoris for 20 years without having suffered a major cardiac event (although coronary artery spasm can result in prolonged symptoms without causing a myocardial infarction). Another example would be a history of sudden death. Most patients who have suffered a cardiac arrest require resuscitative efforts for recovery. Patients who state they were told that they "died" should give a history of efforts made to save them.

### **Clinical Significance**

It has been said that a careful history and physical examination can lead to a correct diagnosis in the majority of patients. This is certainly true with the past history, an area frequently overlooked by house officers, especially in the tense atmosphere of an acute illness. The physician must use considerable skill in obtaining an accurate historical account. Today, the average patient has been exposed to a wealth of medical information. Both accurate and inaccurate descriptions of heart attacks, strokes, cancer, and so forth are seen daily on television and in films, and people are as familiar with Reye's syndrome as they are with migraine headaches. In addition, the general population has become more concerned with health, especially in the area of cardiovascular disease. Although symptoms confined to an area between the larynx and the umbilicus are not all cardiac in origin, it is the heart that, in the patient's mind, is the organ of prime concern.

In relating their past history, many adults describe events as told to them by parents, relatives, friends, and physicians. A classic example is the patient who states that his mother told him never to take penicillin, but the reason for this restriction is not known. A febrile illness accompanied by a systolic murmur becomes rheumatic fever (especially if the illness occurred during the era when this disease was very common). Rheumatic fever then becomes translated into rheumatic heart disease when the patient, years later, complains of fatigue. Patients with a history of shortness of breath or swelling of the lower extremities may have acquired a label of congestive heart failure, and may be placed on a digitalis preparation.

A past history of cardiovascular disease is an extremely important part of the patient's evaluation and should not be dismissed as "noncontributory." When a patient presents to an emergency room with atypical chest pain, previous cardiovascular problems or evaluations could mean the difference between an outpatient clinic appointment and admission to a CCU. A history of previous cardiac procedures, if the results can be obtained, may avoid unnecessary repeat testing and reduce hospital or clinic costs. If the patient is in acute distress, one should not hesitate to postpone a detailed history until he or she is more stable. (House officers are often reluctant to go back to the patient once the "official" admitting history and physical have been written. Repeat questioning once the patient is no longer in pain or respiratory distress not only can lead to more appropriate care but can avoid embarrassing moments the following morning during attending rounds!)

Finally, one must remember that, while constructive skepticism is necessary during history taking, cynicism is counterproductive. Whether the patient calls it heart attack, indigestion, chest pain, smothering, or gas, the symptoms are real and must be included in the evaluation. It is up to the physician, not the patient, to attach the correct diagnostic label.

### **References**

- Braunwald E. The history. In: Braunwald E, ed. *Heart disease, a textbook of cardiovascular medicine*. 3rd ed. Philadelphia: W. B. Saunders, 1988;chap 1.
- DeGowin EL, DeGowin RL. *Bedside diagnostic examination*. 2nd ed. New York: Macmillan, 1969; 25-27.

\*Hurst JW, Morris DC, Crawley IS. The history: symptoms due to cardiovascular disease. In: Hurst JW, Logue RB, Rackley CE, Schlant RC, Sonnenblick EH, Wallace AG, Wenger NK, eds. *The heart*. 6th ed. New York: McGraw-Hill, 1985; chap 7.

New York Heart Association, Criteria Committee. *Nomenclature and criteria for diagnosis of diseases of the heart and great vessels*. 8th ed. Boston: Little, Brown, 1979.

White PD. *Heart disease*. 3rd ed. New York: Macmillan, 1944; 21–23.